

## Enabling Asynchronous I/O for Oracle

Platform: IBM zSeries (SUSE LINUX Enterprise Server 9 (s390x))

Database Version: Oracle 10g Release 1 (10.1.0.3)

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### Resources:

IBM/Oracle Guide: <http://www.redbooks.ibm.com/redbooks/pdfs/sg246482.pdf>  
(Chapter 3, page 50 - page 70 of the .pdf)

Metalink Notes: 225751.1, 270213.1, 301213.1, 237299.1

### Mount relevant file systems with async option:

If the file system(s) in question are not already listed in `/etc/fstab` with the `async` option, then mount with `-o async`. Reference: <http://www.die.net/doc/linux/man/man8/mount.8.html>.

### Stop all Oracle processes:

```
oracle:yourserver [yourdb] $ echo $ORACLE_HOME
/opt/oracle/product/10.1.0.3
oracle:yourserver [yourdb] $ echo $AGENT_HOME
/opt/oracle/product/10g_agent
oracle:yourserver [yourdb] $ $AGENT_HOME/bin/emctl stop agent
oracle:yourserver [yourdb] $ lsnrctl stop
oracle:yourserver [yourdb] $ dbshut
```

### Relink Oracle:

```
oracle:yourserver [yourdb] $ ps -ef | grep ora
oracle:yourserver [yourdb] $ cd $ORACLE_HOME/rdbms/lib
oracle:yourserver [yourdb] $ make -f ins_rdbms.mk async_on
oracle:yourserver [yourdb] $ make -f ins_rdbms.mk ioracle
```

### For each Database:

```
oracle:yourserver [yourdb] $ export ORACLE_SID=yourdb
oracle:yourserver [yourdb] $ . oraenv
oracle:yourserver [yourdb] $ sqlplus "/ as sysdba"
SQL> startup nomount;
SQL> show parameter disk_async_io
SQL> alter system set disk_async_io=TRUE scope=SPFILE;
SQL> show parameter filesystemio_options
SQL> alter system set filesystemio_options=async scope=SPFILE;
SQL> shutdown immediate;
SQL> startup;
```

### Verify that Asynchronous I/O is being used:

```
oracle:yourserver [yourdb] $ cat /proc/slabinfo | grep ki
kiocbx      33    35   512    7    1 : tunables   54   27    8 : slabdata    5    5    0
kiocb       7     15   256   15    1 : tunables   120  60    8 : slabdata    1    1    0
```

The bolded values should be non-zero if asynchronous I/O is being used

### Restart all Oracle processes:

```
oracle:yourserver [yourdb] $ lsnrctl start
oracle:yourserver [yourdb] $ $AGENT_HOME/bin/emctl start agent
```